IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): C.-S. Li et al.
Case: YOR920010407US1
Serial No.: 09/896,584
Filing Date: June 29, 2001
Group: 3627
Examiner: Asfand M. Sheikh

Title: Methods and Apparatus for Automatic Replenishment of Inventory Using Embedded Sensor System and Electronic Marketplace

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APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants (hereinafter referred to as "Appellants") hereby appeal the final rejection of claims 1-4, 7-10, 13, 15-18, and 21-26 of the above-identified application.

The present application should be permitted to proceed to the Board for a decision on the merits.

REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, as evidenced by an assignment recorded October 10, 2001 in the U.S. Patent and Trademark Office at Reel 12256, Frame 860. The assignee, International Business Machines Corporation, is the real party in interest.

RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any related appeals or interferences.

STATUS OF CLAIMS

The present application was filed on June 29, 2001 with claims 1-26.

Claims 5, 6, 11, 12, 14, 19, and 20 have been canceled without prejudice.

Claims 1-4, 7-10, 13, 15-18, and 21-26 are the pending independent claims.

Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under 35 U.S.C. §103(a).

Claims 10 and 24 stand rejected under 35 U.S.C. §103(a).

Claims 1-4, 7-10, 13, 15-18, and 21-26 are appealed.

STATUS OF AMENDMENTS

There has been no amendment filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 recites a computer-based method of automatically controlling an inventory of items. The method comprises the step of at least one broker device automatically collecting information relating to a status associated with at least one inventory item from one or more sources. The at least one broker device automatically accessing at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site. The broker device accessing the electronic marketplace in order to: (1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace; and (2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item. The at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders.

An illustrative embodiment of a computer-baser method of automatically controlling an inventory of items is described in the specification at, for example, page 5, lines 16-25, with reference to FIG. 1A. At least one broker device automatically collecting information relating to a status associated with at least one inventory item from one or more sources (e.g., Specification, pg. 9, lines 10-15). The at least one broker device automatically accessing at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site (e.g., Specification, pg. 10, line 26, to pg. 11, line 2; See Specification, pg. 3, lines 2-14). The broker device accessing the electronic marketplace in order to: (1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace (e.g., Specification, pg. 9, line 16, to pg. 10, line 10); and (2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item (e.g., Specification, pg. 12, line 8, to pg. 13, line 14). The at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders (Specification, pg. 9, lines 16-24).

Independent claim 15 recites an apparatus for automatically controlling an inventory of items. The apparatus comprises at least one processor operative to: (i) receive automatically collected information relating to a status associated with at least one inventory item from one or more sources; and (ii) automatically access at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site, in order to obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace, and to order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item; and (iii) one of aggregate and deaggregate multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders. The apparatus further comprises a memory, coupled to the at least one processor, for storing at least the collected status information.

An illustrative embodiment of an apparatus for automatically controlling an inventory of items is described in the specification at, for example, page 5, lines 16-25, with reference to FIG. 1A. The apparatus comprises at least one processor (e.g., Specification, pg. 7, lines 1-27, and FIG. 1B; Specification, pg. 8, line 17, to pg. 9, line 9, and FIG. 1C) operative to: (i) receive automatically collected information relating to a status associated with at least one inventory item from one or more sources (e.g., Specification, pg. 9, lines 10-15); and (ii) automatically access at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site (e.g., Specification, pg. 10, line 26, to pg. 11, line 2; See Specification, pg. 3, lines 2-14), in order to obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace (e.g., Specification, pg. 9, line 16, to pg. 10, line 10), and to order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item (e.g., Specification, pg. 12, line 8, to pg. 13, line 14); and (iii) one of aggregate and deaggregate multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders (Specification, pg. 9, lines 16-24). The apparatus further comprises a memory, coupled to the at least one processor, for storing at least the collected status information (e.g., Specification, pg. 7, lines 1-27, and FIG. 1B; Specification, pg. 8, line 17, to pg. 9, line 9, and FIG. 1C).

Independent claim 25 recites a system for automatically controlling an inventory of items. The system comprises at least one sensor operative to automatically obtain information relating to a status associated with at least one inventory item. The system further comprises at least one computer system, operatively coupled to the at least one sensor, operative to receive the status information and to automatically access at least one electronic marketplace in order to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item in accordance with at least one provider of the item via the at least one electronic marketplace, and to one of aggregate and deaggregate orders for the inventory item so that an overall purchasing cost is minimized.

An illustrative embodiment of a system for automatically controlling an inventory of items is described in the specification at, for example, page 5, lines 16-25, with reference to FIG. 1A. The system comprises at least one sensor operative to automatically obtain information relating to a status associated with at least one inventory item (e.g., Specification, pg. 7, lines 1-12; Specification, pg. 6 lines 11-28). The system further comprises at least one computer system (e.g., Specification, pg. 9, lines 16-27), operatively coupled to the at least one sensor (e.g., FIG. 1A; Specification, pg. 9, lines 10-13), operative to receive the status information (e.g., Specification, pg. 9, lines 10-15) and to automatically access at least one electronic marketplace (e.g., Specification, pg. 10, line 26, to pg. 11, line 2; See Specification, pg. 3, lines 2-14) in order to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item in accordance with at least one provider of the item via the at least one electronic marketplace (e.g., Specification, pg. 9, line 16, to pg. 10, line 10; Specification, pg. 12, line 8, to pg. 13, line 14), and to one of aggregate and deaggregate orders for the inventory item so that an overall purchasing cost is minimized (Specification, pg. 9, lines 16-24).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. Claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,749,081 (hereinafter "Salvo") in view of U.S. Patent No. 6,260,024 (hereinafter "Shkedy").

II. Claims 10 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Salvo in view of Shkedy, and further view of U.S. Patent No. 5,749,081 (hereinafter "Whiteis").

ARGUMENT

Appellants incorporate by reference herein the disclosures of all previous responses filed in the present application, namely, the responses dated January 31, 2006, July 7, 2006, February 15, 2007, July 9, 2007, and August 28, 2007. Sections I and II to follow will respectively address grounds I and II presented above.

I. Obviousness of claims 1-4, 7-9, 13, 15-18, 21-23, 25, and 26

A. Independent claims 1, 15, and 25

Regarding the §103(a) rejection of independent claims 1, 15, and 25, Appellants respectfully submit that the teachings of Salvo and Shkedy, alone or in combination, fail to teach or suggest all of the limitations of the recited claims, as will be explained below. Furthermore, with regard to the combination of the references, Appellants assert that such combination is improper, as will be explained below.

The Examiner cites Salvo in combination with Shkedy in rejecting independent claims 1, 15, and 25. More particularly, the Examiner cites portions of Salvo as disclosing certain limitations of the independent claims, and cites portions of Shkedy as disclosing certain other limitations of the independent claims. Below Appellants explain how such portions of Salvo and Shkedy fail to teach or suggest what the Examiner contends that they teach or suggest. While Appellants may refer from time to time to each reference alone in describing its deficiencies, it is to be understood that such arguments are intended to point out the overall deficiency of the cited combination.

Appellants initially note that a proper case of obviousness has not been presented if the references, when combined, do not teach or suggest all the claim limitations. Furthermore, the claimed subject matter is not obvious if there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references or to modify the reference teachings. An analysis supporting a rejection under 35 U.S.C. §103 should be explicit and should not based on mere conclusory statements. See KSR v. Teleflex, 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (U.S., Apr. 30, 2007), quoting In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.").

Independent claim 1 recites a computer-based method of automatically controlling an inventory of items, comprising the steps of: at least one broker device automatically collecting information relating to a status associated with at least one inventory item from one or more sources; the at least

one broker device automatically accessing at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site, the broker device accessing the electronic marketplace in order to: (1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace; and (2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item; and the at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders. Independent claims 15 and 25 recite similar limitations.

The Examiner argues that Salvo discloses the limitations of the recited claims, yet the Examiner concedes in the Office Action at page 3, second paragraph that:

> Salvo fails to explicitly disclose an electronic market place wherein the electronic market place comprises an electronic trading network site; ordering a quantity of inventory via the electronic market place; and the at least one broker device one of aggregating and deaggregating multiple orders for the inventory as to minimize an overall purchasing cost attributable to the multiple orders.

Appellants assert that Salvo cannot teach any of the claimed limitations without disclosing an electronic marketplace. The recited electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site is fundamental to interpreting the subject matter of the claims. Electronic marketplaces are disclosed in the Summary of the Invention section of the present specification at page 3, lines 2-14:

> [T]he present invention provides techniques for automatically replenishing inventory which exploit the use of electronic marketplaces. As is known with respect to the World Wide Web (or the Internet), "electronic marketplaces" (also referred to as "e-marketplaces") are web sites comprising one or more server systems which allow visitors, via their own computers, to openly offer items for sale, place bids on items, trade items, and permit the use of various pricing mechanisms to discover the true "value" of a certain item based on the equilibrium of supply and demand. Examples of such electronic marketplaces or trading networks that have emerged and are commercially available include WebSphere Commerce Suite Marketplace Edition

(trademark of IBM Corporation), Ariba Buyer and Ariba Marketplace (trademarks of Ariba, Inc.), Market Set (trademark of SAPMarkets, Inc.), and ConnectTrade (trademark of Metiom, Inc.). As will be illustratively explained below, the present invention utilizes such electronic marketplaces in order to provide end consumers with automated inventory control.

By failing to disclose an electronic marketplace, Salvo can not teach the claimed limitations as argued by the Examiner. More specifically, Salvo does not teach at least one broker device automatically accessing at least one electronic marketplace. Nor does Salvo teach the broker device accessing the electronic marketplace in order to: (1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace; and (2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item. Nor does Salvo teach at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders.

In the Office Action, the Examiner seems to suggest that Salvo at column 6, lines 47-62, discloses the aggregation/deaggregation feature. However, this clearly is not the case. Claim 1 recites that the at least one broker device one of aggregates and deaggregates multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders. While the control unit 114 in Salvo performs various functions based on the information it obtains, it does not one of aggregate and deaggregate multiple orders for the inventory item associated with one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders. Column 6, lines 47-62, of Salvo states no such feature.

With regard to the Shkedy reference, Appellants initially submit that Shkedy fails to remedy the deficient teachings of Salvo as discussed above. For example, Shkedy does not disclose at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources. Shkedy does not aggregate multiple orders for inventory items which were ordered based on automatically collected status information. Rather, Shkedy discloses the

pooling of buyers' manual selection of goods. (Shkedy, col. 5, lines 7-24). Further, Shkedy makes no mention of deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders. Deaggregating is described in the Specification in an illustrative embodiment at page 9, lines 23-24: "by deaggregating the data, the broker may be able to take advantages of purchasing opportunities on smaller quantities." For at least these reasons, Appellants contend that the combined references fail to render the claims obvious.

Further, Appellants submit that the Examiner provides insufficient evidence of a motivation to combine the cited references. The Examiner states in the Office Action at page 4, first full paragraph:

> It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Salvo to include an electronic market place wherein the electronic market place comprises an electronic trading network site; ordering a quantity of inventory via the electronic market place; and a broker device one of aggregating and deaggregating multiple orders for the inventory as to minimize an overall purchasing cost attributable to the multiple orders as taught by Shkedy. One of ordinary skill in the art would have been motivated to combine the teachings in order to aggregate purchase orders to potential sellers to bid on for the best price (Shkedy, col. 3, lines 1-5 and col. 8, lines 50-54).

Appellants respectfully submit that this is a conclusory statement of the sort rejected by both the Federal Circuit and the U.S. Supreme Court. See KSR v. Teleflex, No. 13-1450, slip. op. at 14 (U.S., Apr. 30, 2007), quoting In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). There has been no showing in the present §103(a) rejection of objective evidence of record that would motivate one skilled in the art to combine Salvo and Shkedy to produce the particular limitations in question. Salvo teaches techniques for inventory management, and Shkedy teaches a technique for facilitating buyer-driven purchase orders on a network. The Examiner has failed to show that a person of ordinary skill in the art would combine the two references to reach the claimed limitations.

Appellants respectfully submit that the Examiner appears to be engaging in a hindsight-based piecemeal analysis in arguing that Salvo and Shkedy teach the claimed limitations. See, e.g., Princeton Biochemicals, Inc. v. Beckman Coulter, Inc., 411 F.3d 1332, 1337, 75 USPQ2d 1051, 1054 (Fed. Cir. 2005) ("[I]n making the assessment of differences between the prior art and the claimed subject matter, section 103 specifically requires consideration of the claimed invention 'as a whole.' ... Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components."); Ruiz v. A.B. Chance Co., 357 F.3d 1270, 1275, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004) ("The 'as a whole' instruction in [35 U.S.C. §103(a)] prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. . . . Section 103 precludes this hindsight discounting of the value of new combinations by requiring assessment of the invention as a whole."). In this case, it appears that the Examiner, in formulating the obviousness rejection, came across the components of reference A (Salvo) and reference B (Shkedy) using the Appellants' invention as a roadmap. For at least this reason, Appellants believe that the §103 rejection is invalid.

Accordingly, Appellants request that the §103 rejection of independent claims 1, 15, and 25 be withdrawn.

B. Dependent claims 2-4, 7-9, 13, 16-18, 21-23, and 26

With regard to dependent claims 2-4, 7-9, 13, 16-18, 21-23, and 26, Appellants submit that these claims are patentable due to their dependence of independent claims 1, 15, and 25, the patentability of which were discussed above. Appellants further contend that at least one of the claims recite patentable subject matter in their own right.

For example, claim 2 recites the electronic marketplace accessing step further comprises monitoring at least one of pricing and supply trends associated with the at least one electronic marketplace on the at least one inventory item. Claim 16 recites similar subject matter. The Examiner argues that Salvo teaches the limitations of claims 2 and 16 at Salvo, col. 6, lines 11-19. Appellants assert that Salvo does not teach monitoring at least one of pricing and supply trends with regard to electronic marketplaces as recited in the claims. Salvo does not disclose accessing an electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site as previously discussed.

Also, claim 3 recites an optimal time to acquire the at least one inventory item via the at least one electronic marketplace. Claim 17 recites similar subject matter. The Examiner argues that Salvo teaches the limitations of claims 3 and 17 at Salvo, col. 6, lines 41-43, "[t]he shipping information sources 116 also provide the control unit 114 with transport data for analyzing, including time needed for delivery from the vendor to the manufacturing site . . . ." Appellants assert that Salvo does not disclose an optimal time to acquire an inventory item via the at least one electronic marketplace, rather, Salvo is simply describing the act of obtaining shipping information.

Further, claim 4 recites an optimal quantity of the at least one inventory item to acquire via the at least one electronic marketplace. Claim 18 recites similar subject matter. The Examiner argues that Salvo teaches the limitations of claims 4 and 18 at Salvo, col. 6, lines 32-34 and lines 47-63. Appellants assert that Salvo is does not disclose an optimal quantity of the at least one inventory item to acquire via the at least one electronic marketplace.

For at least these reasons, Appellants believe that dependent claims 2-4, 7-9, 13, 16-18, 21-23, and 26 are not obvious in light of the cited references. Accordingly, Appellants respectfully request withdrawal of the §103 rejection.

II. Obviousness of dependent claims 10 and 24

Regarding the §103(a) rejection of claims 10 and 24, Appellants reassert that the combination of Salvo and Shkedy fail to teach or suggest all of the limitations of the independent claims as

discussed above. It follows that dependent claims 10 and 24 are patentable due to their dependence of independent claims 1 and 15. Appellants further assert that Whiteis fails to remedy the deficiencies of Salvo and Shkedy as discussed above. In addition, Appellants contend that claims 10 and 24 recite patentable subject matter in their own right.

Dependent claim 10 recites automatically generating a recommendation of at least one of a different brand and a different type of an item to a consumer of the inventory. And dependent claim 24 recites similar subject matter.

Appellants assert that there is a clear lack of motivation to combine Salvo, Shkedy, and Whiteis. Other than a very general and conclusory statement in the Office Action, there is nothing in the two references that reasonably suggests why one would actually combine the teachings of these three references.

The Examiner provides the following statement to prove motivation to combine Salvo, Shkedy, and Whiteis:

> It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Salvo in view of Shkedy to include the step of automatically generating a recommendation of at least one of a different brand and different type of an item to a consumer of the inventory as taught by Whiteis. One of ordinary skill in the art would have been motivated to combine the teachings in order to provide an accurate and subjective recommendation (Whiteis, col. 1, lines 64-67 and col. 2, lines 1-16).

Appellants respectfully submit that this is a conclusory statement of the sort rejected by both the Federal Circuit and the U.S. Supreme Court. See KSR v. Teleflex, No. 13-1450, slip. op. at 14 (U.S., Apr. 30, 2007), quoting In re Kahn, 441 F. 3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). The Examiner fails to identify any objective evidence of record which supports the proposed combination.

Accordingly, Appellants respectfully request that the §103 rejection of claims 10 and 24 be withdrawn.

In view of the above, Appellants believe that claims 1-4, 7-10, 13, 15-18, and 21-26 are in condition for allowance, and respectfully request withdrawal of the §103(a) rejections.

Respectfully submitted,

Date: February 21, 2008

William E. Lewis
Attorney for Appellant(s)
Reg. No. 39,274
Ryan, Mason & Lewis, LLP
90 Forest Avenue
Locust Valley, NY 11560
(516) 759-2946

APPENDIX

1. A computer-based method of automatically controlling an inventory of items, the method comprising the steps of:

at least one broker device automatically collecting information relating to a status associated with at least one inventory item from one or more sources;

the at least one broker device automatically accessing at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site, the broker device accessing the electronic marketplace in order to: (1) obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace; and (2) order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item; and

the at least one broker device one of aggregating and deaggregating multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders.

2. The method of claim 1, wherein the electronic marketplace accessing step further comprises monitoring at least one of pricing and supply trends associated with the at least one electronic marketplace on the at least one inventory item.

3. The method of claim 1, wherein the one or more optimal parameters comprise an optimal time to acquire the at least one inventory item via the at least one electronic marketplace.

4. The method of claim 1, wherein the one or more optimal parameters comprise an optimal quantity of the at least one inventory item to acquire via the at least one electronic marketplace.

7. The method of claim 1, further comprising the step of automatically generating an alert to an individual that an order may need to be placed for the at least one item.

8. The method of claim 1, wherein the step of automatically collecting information further comprises collecting usage pattern information associated with the at least one item.

9. The method of claim 1, wherein the step of accessing the at least one electronic marketplace further comprises gathering information on a market condition associated with the at least one inventory item.

10. The method of claim 1, further comprising the step of automatically generating a recommendation of at least one of a different brand and a different type of an item to a consumer of the inventory.

13. The method of claim 1, wherein the one or more sources comprise an embedded sensor system.

15. Apparatus for automatically controlling an inventory of items, the apparatus comprising:

at least one processor operative to: (i) receive automatically collected information relating to a status associated with at least one inventory item from one or more sources; and (ii) automatically access at least one electronic marketplace, wherein the electronic marketplace comprises an electronic trading network site, in order to obtain information to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item via the at least one electronic marketplace, and to order a quantity of the inventory item via the electronic marketplace from a provider of the inventory item; and (iii) one of aggregate and deaggregate multiple orders for the inventory item associated with the one or more sources so as to minimize an overall purchasing cost attributable to the multiple orders; and

memory, coupled to the at least one processor, for storing at least the collected status information.

16. The apparatus of claim 15, wherein the electronic marketplace accessing operation further comprises monitoring at least one of pricing and supply trends associated with the at least one electronic marketplace on the at least one inventory item.

17. The apparatus of claim 15, wherein the one or more optimal parameters comprise an optimal time to acquire the at least one inventory item via the at least one electronic marketplace.

18. The apparatus of claim 15, wherein the one or more optimal parameters comprise an optimal quantity of the at least one inventory item to acquire via the at least one electronic marketplace.

21. The apparatus of claim 15, wherein the at least one processor is further operative to automatically generate an alert to an individual that an order may need to be placed for the at least one item.

22. The apparatus of claim 15, wherein the at least one processor is further operative to automatically collect usage pattern information associated with the at least one item.

23. The apparatus of claim 15, wherein the at least one processor is further operative to gather information on a market condition associated with the at least one inventory item.

24. The apparatus of claim 15, wherein the at least one processor is further operative to automatically generate a recommendation of at least one of a different brand and a different type of an item to a consumer of the inventory.

25. A system for automatically controlling an inventory of items, the system comprising:

at least one sensor operative to automatically obtain information relating to a status associated with at least one inventory item; and

at least one computer system, operatively coupled to the at least one sensor, operative to receive the status information and to automatically access at least one electronic marketplace in order to determine one or more optimal parameters, based on the collected status information, to be used for replenishing the at least one inventory item in accordance with at least one provider of the item via the at least one electronic marketplace, and to one of aggregate and deaggregate orders for the inventory item so that an overall purchasing cost is minimized.

26. The system of claim 25, further comprising at least another computer system, operatively coupled between the at least one sensor and the first computer system, operative to serve as a gateway.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.